

Abstract

The dual stage inflator has a divider plate that separates gas generant in the primary chamber from gas generant in the secondary chamber. Burning of the gas generant yields inflation gas that is useful for inflating a vehicle airbag. The gas generant from the primary chamber is ignited from a separate ignition train than the gas generant in the secondary chamber. The divider plate in the inflator is capable of moving during the operation of the inflator. Before the inflator is fired, the divider plate rests against the inner surface of the lower housing. The divider plate prevents inflation gas from the primary chamber from igniting the secondary chamber. However, when the internal pressure of the secondary chamber exceeds the internal pressure of the primary chamber, the divider plate is displaced in an upward direction thereby permitting the inflation gas from the secondary chamber to flow around the divider plate and out of the inflator.